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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,015	01/08/2004	Harry W. Parker	0225	7136
112	7590	11/15/2005	EXAMINER	
ARMSTRONG WORLD INDUSTRIES, INC. LEGAL DEPARTMENT P. O. BOX 3001 LANCASTER, PA 17604-3001			SELLERS, ROBERT E	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.		Applicant(s)	
	10/754,015		PARKER ET AL.	
	Examiner		Art Unit	
	Robert Sellers		1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-70 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-6, 9-18, 21-27, 29 and 30, drawn to a composition comprising
 - a) a ricinoleic acid component, b) an epoxy group-containing compound and c) a crosslinker, classified in class 525, subclass 532.
 - II. Claims 7, 8 and 30, drawn to the composition of Group I further comprising a polyamine, classified in class 525, subclass 423.
 - III. Claims 19, 20 and 28, drawn to a surface covering including the composition of Group I, classified in class 428, subclass 413.
 - IV. Claims 31-35, drawn to the composition of Group I further comprising a polycarboxylic acid, classified in class 525, subclass 533.
 - V. Claims 36-38, drawn to a composition containing the reaction product of a polycarboxylic acid and an epoxidized vegetable oil, and the reaction product of a ricinoleic acid (estolide) and/or castor oil (estolide) and a polycarboxylic acid, classified in class 525, subclass 449.
 - VI. Claims 39-47 and 50, drawn to a penetrating polymer network prepared from
 - a) i) a hydroxyl and/or carboxylic acid moiety-containing esterified ricinoleic acid polyester coupled to ii) an epoxy group-containing compound and b) a hardener, and an elastomeric polymer sheet containing it (claim 50), classified in class 525, subclass 450.
 - VII. Claims 48 and 49, drawn to a decorative surface covering obtained from the penetrating polymer network of Group VI, classified in class 428, subclass 480.

- VIII. Claims 51-57, 62, 63 and 65-70, drawn to a process for making a ricinoleic acid (estolide) based polymer comprising (a) mixing and heating a ricinoleic acid component, a crosslinker and an epoxy group-containing compound to form a pre-cured material, and (b) heating the procured material under pressure, classified in class 523, subclass 427.
- IX. Claims 58, 59 and 61, drawn to the process for making a ricinoleic acid (estolide) based polymer comprising (i) reacting a mixture of a ricinoleic acid component and a polycarboxylic acid in the presence of an acid catalyst, adding a second polycarboxylic acid and an epoxidized vegetable oil, (iii) heating the mixture of step (ii) and (iv) adding an additive component of a thermally activated free radical initiator, classified in class 523, subclass 458.
- X. Claim 60, drawn to the process of Group IX wherein a polyamine is added in step (ii) or step (iv), classified in class 523, subclass 428.
- XI. Claim 64, drawn to the process of claim 62 of Group VIII wherein another crosslinker is added to the ricinoleic acid component and polycarboxylic acid crosslinker in step (i), classified in class 525, subclass 451.

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The inventions are distinct from each other because of the following reasons:

2. Groups I and (II or III or IV) are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as an adhesive formulation and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

3. The polyamine in the composition of Group II and the additional polycarboxylic acid in that of Group IV yield structurally distinct cured products from that of Group I as well as from each other due to the different reaction mechanisms involving the amine groups of the polyamine and the carboxyl groups of the polycarboxylic acid.

4. The compositions of Group II and IV are useful other than to prepared the surface covering of Group III such as a molded article.

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5. The composition of Group V is different from those of Groups I, II and IV because the separate reactions of both the epoxidized vegetable oil and ricinoleic acid (estolide) and/or castor oil (estolide) with a polycarboxylic acid results in a blend of structurally diverse reaction products.

6. The penetrating polymer network of Group VI possesses a distinct morphology from the compositions of Groups I, II, IV and V due to the presence of interlaced and covalently bonded networks in the penetrating network polymer according to page 8, paragraph 26 of the specification.

7. Inventions VI and VII are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a free-standing molded article and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

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8. Inventions (VIII-XI) and (I-VII) are related as process of making and product made. The inventions are distinct if either or both of the following can be shown:

(1) the process as claimed can be used to make another materially different product or

(2) the product as claimed can be made by another materially different process

(MPEP § 806.05(f)). In the instant case, the product as claimed can be made by

another materially different process such as the pre-reaction of the ricinoleic acid

component and epoxy group-containing compound followed by a reaction with the

crosslinker.

9. The processes of Groups VIII, IX, X and XI involve materially different steps

including the introduction of a second polycarboxylic acid in the process of Group IX,

the addition of a polyamine in the process of Group X, and the incorporation of another

crosslinker in the process of Group XI.

Restriction for examination purposes as indicated is proper because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification.

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This application contains claims directed to the following patentably distinct species of the claimed invention:

Contingent upon the election of any of Groups I-XI hereinabove:

- a) Castor oil, castor oil estolide, ricinoleic acid or ricinoleic estolide.
- b) An epoxy resin alone, an epoxidized vegetable oil alone, or a combination of an epoxy resin and an epoxidized vegetable oil, wherein if the epoxy resin is elected, a particular species thereof is identified such as the diglycidyl ether of bisphenol A described on page 15, line 52 of the specification.
- c) The crosslinkers of claim 12 wherein if a polyfunctional amine is elected, a particular species thereof is identified from claim 14; if a polycarboxylic acid is elected, a particular species thereof is identified from claim 13; or if a polyacrylate is elected, a particular species thereof is identified such as the Ebecryl® 140 tetra-acrylate disclosed on page 16, line 56.
- d) The presence or absence of the additional component of claim 3 wherein if a crosslinking catalyst is deemed to be present, a particular species thereof is designated from claim 6, if a filler is deemed to be present, a particular species thereof is selected from claim 9, or if both a crosslinking catalyst and a filler are deemed to be present, particular species thereof are chosen from claims 6 and 9.

Contingent upon the election of Group II or X, items a), b), c) and d) hereinabove and e) the polyamines wherein a single species is designated from claim 8.

Contingent upon the election of Group IV, items a), b), c) and d) hereinabove and f) either sebacic acid, citric acid, or a combination thereof from claim 32 is identified.

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Contingent upon the election of Group V or IX, items a), b), c) and d) hereinabove and g) the polycarboxylic acids wherein a single species is selected from either sebacic acid, citric acid, or a combination thereof as confirmed by page 13, paragraphs 44-46 and page 14, lines 1-3.

Contingent upon the election of Group XI, items a, b), c) and d) hereinabove and g) the other crosslinker wherein a particular species is chosen following the criteria of item c) hereinabove.

The election of a single disclose species ***within each of items a), b), c) and d) hereinabove, as well as items e), f), g) and h) if Group II, IV, VI, IX or X is elected***, is required under 35 U.S.C. 121 for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1-70 are generic.

A reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

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Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

The reply to this requirement to be complete must include an election of the invention and species to be examined even though the requirement be traversed (37 CFR 1.143).

Upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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10. There is no antecedent basis for the polycarboxylic acid of claim 29 in claim 1 wherefrom it depends since claim 1 only denotes a crosslinker. The amendment of claim 29 to the language "wherein the crosslinker is a polycarboxylic acid" in line 2 would provide proper antecedent basis.

11. There is no antecedent basis for the additional component of claim 63 in claim 62, and ultimately claim 51, wherefrom it depends. Claim 52 defines a "additive component" as opposed to the "additional component" of claim 63.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).



Robert Sellers
Primary Examiner
Art Unit 1712